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(54) A display shelf/case divider system

(57) A display shelf/case divider system for use in a display case 2, comprises a stock limiter plate 14 having slots 18 in it to co-operate with dividers 10 also having slots 16a, 16b in them such that items may be kept to the front of the display case 2. The dividers 10 are moveable along the length of the display case 2 and the limiter plate 14 may co-operate with any one of the slots 16a, 16b in the dividers 10 as required. The limiter plate 14 itself has a number of slots 18 such that the dividers 10 may be spaced apart by varying distances as required by the display case user.

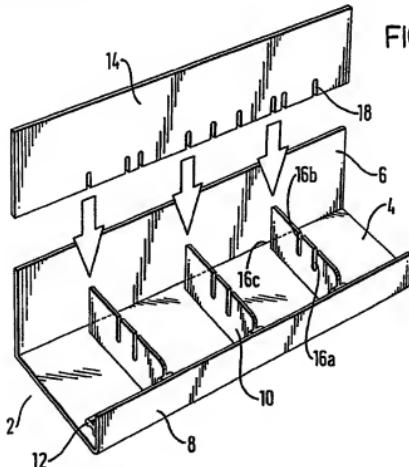


FIG.1

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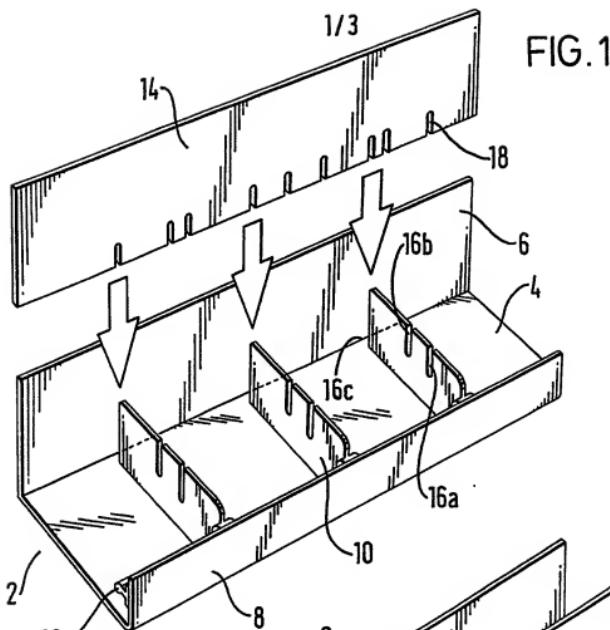


FIG. 2

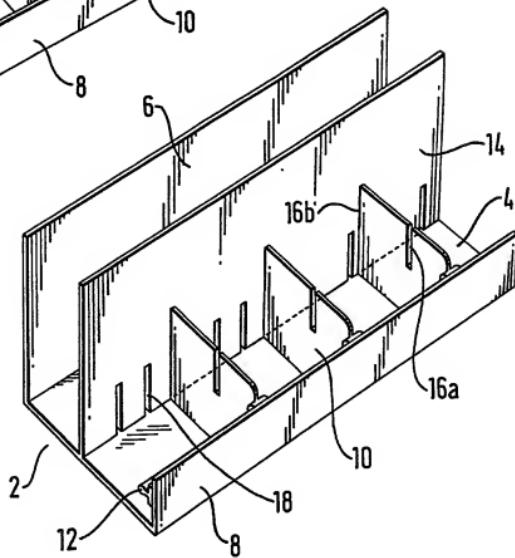


FIG. 3

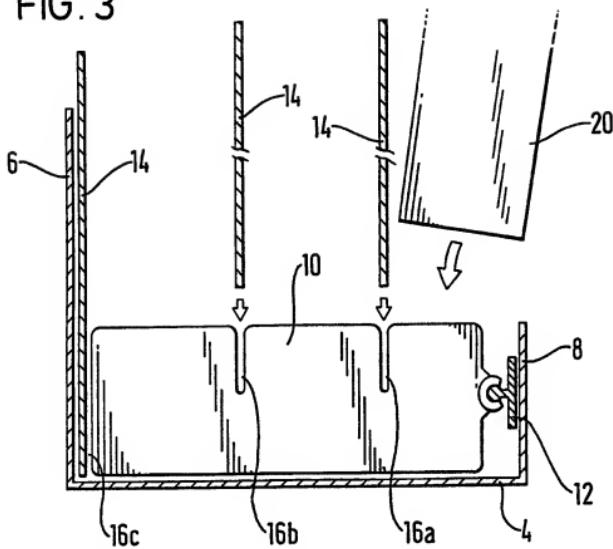


FIG. 5

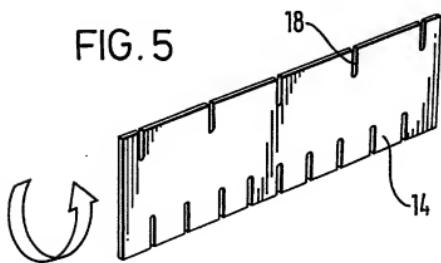


FIG. 4A

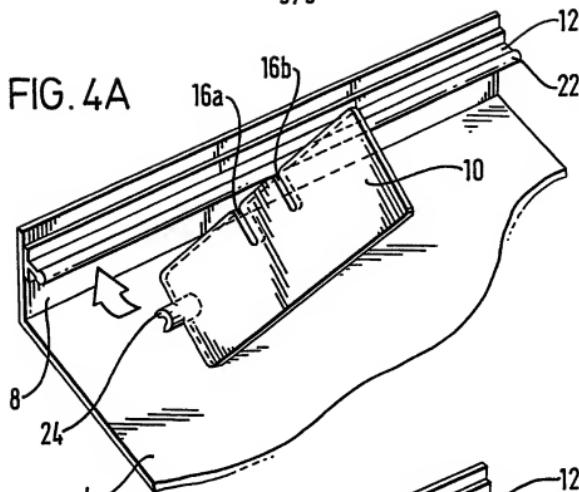
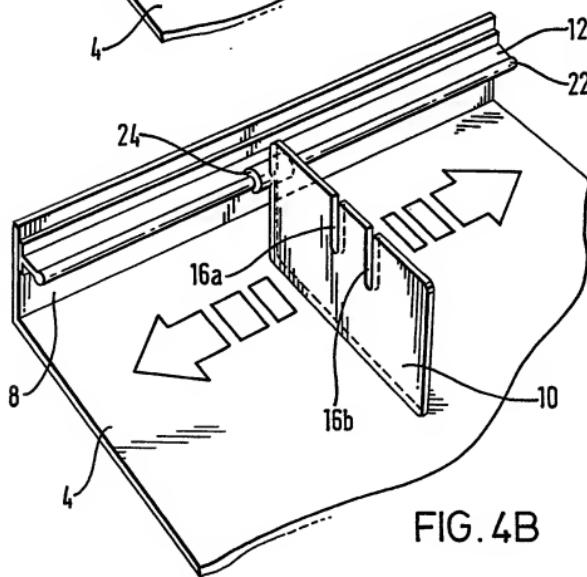


FIG. 4B



A DISPLAY SHELF/CASE DIVIDER SYSTEM

The present invention relates to the display or storage of items in shops or elsewhere and specifically to a divider system for use in display or storage cases, 5 shelves or racks, offering flexibility to accommodate varying stocks and types of product.

Individual items are usually displayed or stored on shelves or in pockets, in juxtaposition to each other in rows and columns. Identical items are put in the same 10 column. Dividers, extending from the back of the display to the front, are used to separate the columns, especially where they separate different products. Such dividers may either be rigidly mounted in one place or, more usually, they may be movable and can be used in any one of a number 15 of positions along the length of the display case. In the latter case the possible positions can be defined by some means such as by holes in the floor of the shelf and possibly at the back of the case. By rearranging the dividers a user may display different types of items within 20 the same case or may rearrange what is stored in the display case as he wishes.

During the year consumer requirements for quantities of items vary. For instance, at a time such as Christmas many products such as video tapes, compact discs, compact 25 cassettes etc. sell quickly and retailers need to hold, both in stock and on display, several copies of the same tapes or discs etc., in which case they tend to fill their displays completely. At other times of the year sales slacken and retailers do not require to keep as many copies 30 of the same item in stock at any one time. Therefore at these times fewer copies of an item are kept in the display cases.

Products are best displayed at the front of a display case so that they are readily seen and will attract 35 customers. So, whilst a shelf may be able to accommodate many copies, the few that are on display are placed at the front. Frequently, however, these copies will be knocked over and/or pushed to the back, in which case their

presentation is impaired.

Conventionally this problem is overcome by filling the area behind the goods in the display case with some sort of filler, sometimes in the form of other types of stock, but more usually in the form of a polystyrene or other plastics material article intended solely for that purpose. There are several disadvantages to this; one is that a filler is required for spaces behind every divided gap, which in the case of a deep display case is 5 inconvenient, and another is that each time dividers are moved the old filler must be removed and a new one put in. Thus the retailer is required to keep a number of 10 differently sized fillers for different times of year. 15

It is an object of the present invention to provide a 15 divider system for a display or storage case which overcomes, at least partially, the above mentioned disadvantages.

Therefore, according to an aspect of the present invention there is provided a divider system for use in a 20 display or storage case, comprising:

a plurality of dividers to be variably spaced apart in said case in a first direction; and  
a limiter plate for variably limiting available space within said case in a second direction;

25 wherein said limiter plate and/or dividers are adapted such that the limiter plate may be positioned transversely to and in cooperation with said dividers in any one of a plurality of positions along the length of the dividers.

30 The term display or storage case is intended to include shelves, racks or cases of the type used for the display or storage of items.

35 Preferably the limiter plate fits together with the dividers through a series of slots in either or both of the dividers and limiter plate. All the slots may be equidistant. On the limiter plate they may be in

interleaved sets of different spacings and/or may be on one or more of its edges. The distances between slots on the limiter plate may be the same as the width of a video cassette box, compact cassette box or compact disc box.

5 Further there may be more slots in the limiter plate than there are dividers.

It is also preferred that the dividers are slidably and detachably mounted. This may be on a rail for mounting in a display or storage case. It may be mounted on the 10 rear of a front wall for mounting in such a case, or may be provided on or for mounting on the rear wall of such a case.

According to another aspect there is provided a display case incorporating such a system.

15 According to a further aspect of the invention there is provided a display case divider system for use in a display case, using a stock limiter plate having slots in it to co-operate with dividers also having slots in them such that items may be kept to the front of the display 20 case. The dividers are moveable along the length of the display case and the limiter plate may co-operate with any one of the slots in the dividers as required. The limiter plate itself has a number of slots such that the dividers may be spaced apart by varying distances as required by the 25 display case user.

The present invention will be further described, by way of non-limitative example, with reference to the accompanying drawings, in which:-

30 Figure 1 shows a display case according to the present invention;

Figure 2 shows the display case of Figure 1 with the limiter plate fitted;

Figure 3 shows a cross-sectional view of a display case according to the present invention;

35 Figures 4a and 4b show dividers for use in the present invention; and

Figure 5 shows a stock limiter for use in the present invention.

Figure 1 is of a display case 2 having a floor 4, a rear wall 6 and a low front wall 8 behind which goods are 5 to be stocked. There are also a stock limiter plate 14 and a set of three dividers 10 which are slidable along a rail 12 mounted on the rear of the front wall 8. The dividers define the widths of the columns of goods in the case whilst the limiter plate defines the lengths of the columns 10 and how far they extend into the case.

Each of the three dividers has an identically positioned pair of slots 16a, 16b. The divider slots 16a, 16b are intended to co-operate with slots 18 along one edge 15 of the stock limiter plate 14. Thus, as shown in Figure 3 the stock limiter 14 may be positioned in either of the two slots 16a, 16b. The slots of the dividers and stock limiter plate co-operate such that when the limiter plate 14 is fitted to the dividers 10 its base is in contact with the floor 4 of the display case 2. The dividers do not 20 necessarily extend the full width of the display case, in which case a gap 16c exists between the rear wall 6 and the rear end of the dividers, into which gap 16c the limiter plate may be slotted when not otherwise in use.

There are many slots 18 in the limiter plate 14 with, 25 as can be seen in Figure 1, varying spaces between them. These are so that the same limiter plate can be used with the dividers at other widths than those shown in the drawings. Whilst the dividers are shown as being equidistant they may be unevenly positioned if desired. 30 Equally whilst the limiter plate is shown as fitting exactly within the display case it may instead be shorter so that it can still fit within the length display case whilst co-operating with different widths of displays between the dividers.

35 Figure 2 shows a display case with the limiter plate fitted in the second of the slots 16b within each of the

dividers. Such a configuration might be used when a middling amount of stock is to be kept.

Figure 3 shows a display case in cross section and the various positions into which the limiter plate can be placed. As mentioned above it may be placed in a gap 16c to the rear of the dividers and in front of the rear wall 6 of the display case. That is when it is not needed and stocks of at least some products are high. Alternatively it may be in the second slot 16b when a middling amount of stock is kept, or it may be in the front slot 16a when a minimum stock is used. As shown in Figure 3 a single product item 20, for example a video cassette may be placed in front of the stock limiter 14 when it is slotted into front notch 16a of the dividers. In this position the cassette is readily seen by customers and, as far as the shopkeeper is concerned, it is well presented.

If desired there can be many more slots within the dividers 10 such that many different numbers of product units may be placed in the front of the stock limiter plate. In Figure 3 there is room for only one unit in front of the first of the slots 16a, but numbers will depend upon the product and the width of the display shelf. For instance in the case of hosiery the minimum number may, for example, be anything between 1 and 5.

Figure 4a shows the dividers attached to the rail 12 mounted on the rear of the front wall 8 of the display case 2. A number of dividers may be attached to the rail 12. In this embodiment they are each to be attached through the use of a resilient clip 24, which clips onto a thicker cylindrical part 22 of the rail 12 about which it may rotate and along which it may slide. The dividers may readily be detached or reattached.

Figure 4b shows that the dividers 10 are capable of sliding laterally along the length of the rail 12. Thus they may be used for any type of product.

Figure 5 shows a further embodiment of the stock

limiter plate 14. In this there are slots 18 on both the longitudinal edges of the plate. The limiter plate may be turned over to use the slots on either edge as required.

The Figure 5 embodiment has one set of differently spaced slots along each edge. Differently spaced sets may, however, be interleaved along one or both edges to allow greater flexibility in position of the dividers. Interleaved sets of slots are illustrated on the limiter plate in Figures 1 and 2. By having all the various possible combinations of spacings and slots the same plate may be used for any display, ranging from hosiery to computer games, food, stationery or music.

Limiter plates with slots on more than one side can be manufactured such that one side of the plate corresponds to standard sizes of for example, video box, cassette box and/or compact disc box whilst the other might correspond to standard sizes of battery packets etc. Alternatively if a much more limited use is envisaged or required by the user, one side could have the correct spacing for video cassettes whilst the other could be correct spacing for compact disc boxes. An unlimited variety is possible.

The main aspect of the invention is the co-operation between the stock limiter plate and the dividers. Sets of dividers with a rail or rails could be sold together with limiter plates for use in existing display cases.

All the parts of the display case may be in metal or plastic, for instance the dividers and/or rail could be transparent or opaque injection moulded plastic, whilst the limiter plate could be cut from a flat plate of plastic or moulded. Several of the parts may be formed together, e.g. a front wall of a case and a rail, or the rear wall of a case and a rail, which could be extruded.

Whilst the dividers are shown to slide along a rail at the front of a display case, if a front wall is not desired it is possible to mount rails on the rear wall or even on the floor of the display case. Alternatively the

dividers could have protrusions which fit into slots within the floor and rear wall of the display case such that they could only be fitted in a limited number of positions within the display case, but this could still allow a 5 sufficient variety of positions for the dividers.

The invention is not limited to a storage or display case with a flat floor. The floor may instead be sloping or stepped. The dividers would be adapted for use in such a case, for instance they could be shaped with the same 10 profile as the shelf. The depths of slots in the dividers would be sufficient for no alterations to be needed to the limiter plate.

CLAIMS

1. A divider system for use in a display or storage case, comprising:
  - 5 a plurality of dividers to be variably spaced apart in said case in a first direction; and a limiter plate for variably limiting available space within said case in a second direction; wherein said limiter plate and/or dividers are
  - 10 adapted such that the limiter plate may be positioned transversely to and in cooperation with said dividers in any one of a plurality of positions along the length of the dividers.
2. A system according to claim 1, further comprising a plurality of slots in said dividers into which said limiter plate may be fitted.
- 15 3. A system according to claim 1 or 2, further comprising a plurality of slots in said limiter plate for slotting it onto said plurality of dividers.
- 20 4. A system according to claim 1 or 2 further comprising a plurality of interleaved sets of equidistant slots in said limiter plate for slotting it onto said plurality of dividers.
- 25 5. A system according to claim 3 or 4, wherein said slots of said limiter plate are formed on at least two edges of said plate and wherein said plate may be inverted to use different slots from different edges as required.
- 30 6. A system according to any one of claims 3 to 5, wherein the distances between slots of a set of slots on said limiter plate is equal to the width of a video cassette box compact cassette box or compact disc box.
- 35 7. A system according to any one of claims 3 to 6, wherein the number of slots on said limiter plate is larger than the number of dividers.
8. A system according to any one of claims 2 to 7, wherein said slots on said dividers and/or on said limiter

plate are evenly spaced apart.

9. A system according to any one of the preceding claims further comprising a front wall for mounting on said case, wherein said dividers are mounted on said front wall.

5 10. A system according to any one of the preceding claims further comprising means for sliding said dividers towards and away from each other.

11. A system according to claim 10, wherein said dividers are detachably mounted on said sliding means.

10 12. Apparatus according to claim 10 or 11, wherein said sliding means comprise a rail for mounting on said case.

13. A system according to claim 12 when dependent on claim 9, wherein said rail is provided on the rear of  
15 said front wall.

14. A system according to claim 12, wherein said rail is for mounting on the rear wall of said case.

15. A divider system for use in a display or storage case substantially as hereinbefore described with  
20 reference to and illustrated in the accompanying drawings.

16. A display case comprising a system according to any one of the preceding claims.

17. A display case substantially as hereinbefore described with reference to and illustrated in the  
25 accompanying drawings.

Relevant Technical Fields		Search Examiner MIKE HENDERSON
(i) UK Cl (Ed.L) B8P (PEIB, PEIC, PEID, PEIX, PE2J)		Date of completion of Search 12 NOVEMBER 1993
(ii) Int Cl (Ed.5) A47B 57/58; 96/04 B65D 25/04; 25/06		Documents considered relevant following a search in respect of Claims :- 1-17

## Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii)

## Categories of documents

X:	Document indicating lack of novelty or of inventive step.	P:	Document published on or after the declared priority date but before the filing date of the present application.
Y:	Document indicating lack of inventive step if combined with one or more other documents of the same category.	E:	Patent document published on or after, but with priority date earlier than, the filing date of the present application.
A:	Document indicating technological background and/or state of the art.	&:	Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages		Relevant to claim(s)
X	GB 2221210 A	(NEWTON) whole specification relevant	1-4, 6, 7, 16
X	GB 883636	(MOORE) whole specification relevant	1-3, 6-8, 16
X	GB 614981	(GROB) whole specification relevant	1, 2, 16
X	US 5011241	(HORTON) whole specification relevant	1, 16
X	US 4602715	(SARVER) whole specification relevant	1-3, 8, 16
X	US 3656650	(FRATER) whole specification relevant	1-3, 6-8, 16

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